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MARTIN HURLIMANN

THUMBS TUCKED AROUND HER TAUT CHEST BAND, THIS GURKHA GIRL OF LOW CASTE BEARS A HEAVY BURDEN FOR NEPAL, HER NEARLY TRANSPORTLESS COUNTRY **(page 3)**

Nepal, Land of Mystery, Loses Isolation

THE first United States representative to Nepal, now on his way to establish diplomatic and commercial relations between the two nations, will open a new door in the wall of isolation which long has hidden this secluded Asiatic kingdom from the outside world.

Nepal's maharaja last year announced a national program for educational and economic development. The kingdom has been called "the land of the gods" and "last home of mystery." The Nepalese observe caste (illustration, cover), but it is not quite so important as in adjoining India. However, if a man of high caste happens to eat rice with one below his station, he immediately loses caste.

Religions Share Gods

Few Americans or Europeans have seen this remote, landlocked country of the Himalayas between northeast India and the high, wind-swept plateaus of Tibet. Still fewer have received permission to travel beyond the three main cities of the central valley: Katmandu, Patan, and Bhadgaon. Each of these communities once was the seat of an ancient holy kingdom. Katmandu is the modern capital.

Framed by the ice-capped peaks of the world's highest mountains, the green Valley of Katmandu is a mecca for the followers of Hinduism (illustration, page 4) and Buddhism. In Nepal, evidences of these two religions are everywhere. Meeting and mingling peacefully, they often share the same gods and festivals. Nepal tribesmen show resemblances to Indian and Mongolian peoples, whose general geographic areas they divide. Mongolian strains predominate.

In towns and along trails rise thousands of shrines—statues of monkey and elephant gods, images of the sacred bull, lion-flanked temples of scowling Hindu deities, and huge Buddhist mounds surmounted by pyramids on which great painted eyes broodingly scan the landscape.

There is a death penalty for killing a cow. Cattle freely roam the streets, even in the capital, where Western influence is revealed in paved streets, electric lights, and automobiles. To reach Katmandu, American autos have been carried piecemeal over the surrounding mountains on the backs of patient bearers.

King Is Figurehead

Nepal is about the size of Iowa. It was recognized as independent by treaty with Great Britain in 1923. Titular and religious head of the country is the king, whose ancestors, Hindu Rajputs, fled into the hills in the 14th century and eventually extended their control over the whole region. Actual governing power, however, is in the hands of the prime minister, or maharaja, whose office also is hereditary.

The 6,000,000 Nepalese are largely hill tribes, speaking at least 20 languages and leading a simple pastoral and farming life. Their average height is about five feet, three inches. They enjoy games, dancing, and gambling. Officially banned except during such festivals as the five-day

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CHICAGO MUSEUM OF NATURAL HISTORY

SIXTY MILES EAST OF KIRKUK, THE IRAQ OIL CENTER, LIES LITTLE-KNOWN SULAIMANIYA, A HIGHLAND KURDISH CITY

Though remote from the world, this grain-market city of 20,000, mostly Kurds (page 11), shows signs of progress and has a reputation for extending hospitality to the rare visitor. It has hospitals and schools, and a malaria-fighting program. Many residents speak English, French, or Arabic, as well as Kurdish. Here men and women sift chaff from grain while gossiping in the market place.

New Caledonia, Island of Farms and Mines

THE opening of the French Oceanic Institute at Nouméa, capital of New Caledonia, calls attention to one of France's richest colonies. This long, slim South Pacific island lies like an index finger across a line from Honolulu to Sydney. It is about 3,300 miles southwest of the Hawaiian capital, and 1,000 miles northeast of the Australian metropolis.

Many Americans know the island well. In the spring of 1942, United States troops landed on New Caledonia to help defend it. The islanders had previously declared themselves on the side of General de Gaulle's Free French and had deported the Vichy-minded governor.

Island a Prize Package of Minerals

New Caledonia was discovered in 1774 by Captain James Cook, the English explorer. From the sea, the mountainous island looked so barren, compared to the lush tropical islands Cook had discovered during previous South Pacific cruises, that he gave it Scotland's ancient Roman name.

Cook did not stop to explore the island, and no nation claimed it until the French moved in, in 1853. It has turned out to be a mineral prize, with probably the largest and most varied mineral deposits of any area of equal size. It is about 250 miles long and 30 miles wide. New Caledonia headed the world's nickel producers until discoveries in the early part of the 20th century put Canada at the top of the list.

The island has chromite (illustration, page 6), iron, manganese, cobalt, mercury, copper, lead, gold, and silver. Except for nickel and chromite, deposits have been little developed. The natives, chiefly Melanesians, with a trace of Polynesian blood, do not care for mining. Laborers, both men and women, have been brought from Java and Indochina.

Nickel is found near the surface. It is quarried rather than mined. The open-air work of quarrying attracts Javanese women, although these importees generally prefer jobs as domestic servants.

One-Quarter of the Island Is Farmland

The chromite, which is often mined deep in the earth, is of highest grade. Both metals came to the United States in large quantities during the war, for making armor plate and other supersteels.

Watered by heavy rainfall and drained by many rivers, New Caledonia has much more farmland than its four- and five-thousand-foot mountains had led its discoverer to expect. One-fourth of the area is in farms. The islanders prefer agriculture to mining, and produce so much coffee that it ranks next to nickel as an export. Rice, cotton, wheat, tobacco, vanilla, coconuts, and fruit are also grown for export.

More than a fourth of the island is grazing land, supporting nearly 100,000 cattle and half as many sheep. More than 150 varieties of trees cover a tenth of New Caledonia.

When Captain Cook anchored off the island, native chiefs told him that except for bats and rats there were no mammals on the island. Cook gave them a boar, a sow, and a pair of dogs. But the real founder of the island's livestock industry was the unrecorded man who introduced deer. In time these multiplied so that there was no pasture for cattle. The

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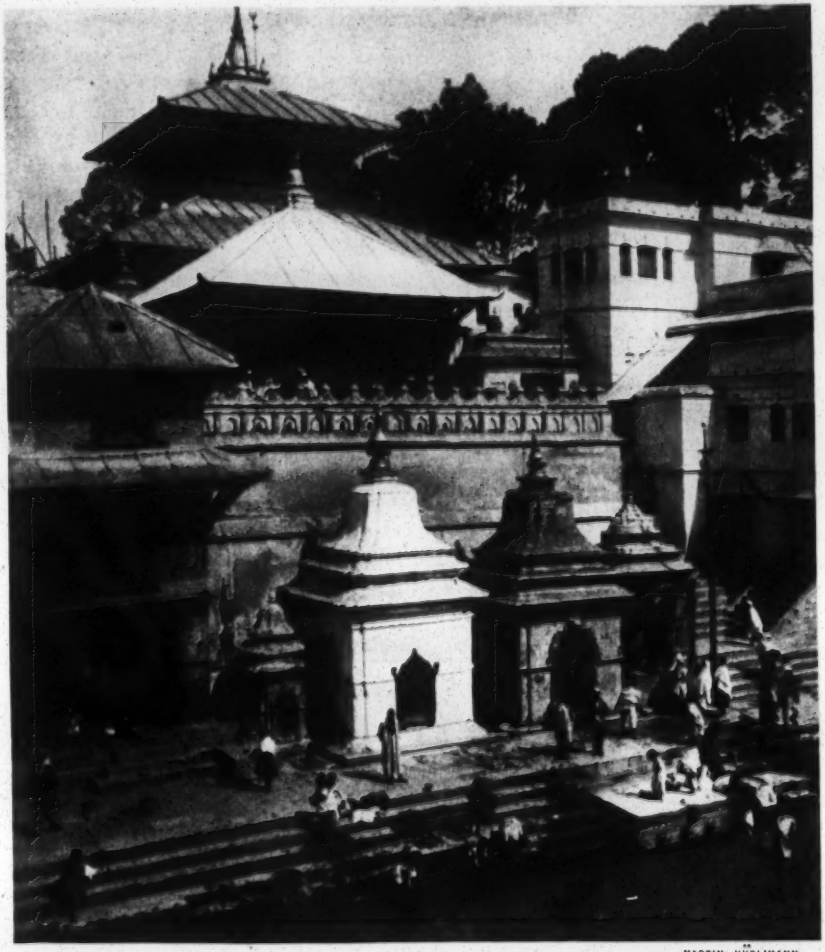
Diwali, gambling then comes into its own as virtually the national pastime. The favorite game of chance consists in throwing 16 cowrie shells on a board and betting on how many will fall face up.

Nepalese suitors gain brides by outsinging them in extemporaneous contests. Child marriage is not common. A joyful 11 days follows the birth of a child. A boy is especially welcomed because he will be able to perform properly the parents' funeral rites. White is worn for mourning, the head, eyebrows, and mustache are shaved, and nothing is eaten for 14 days but rice—and that only once a day.

NOTE: Nepal is shown on the National Geographic Society's map of India and Burma. Write the Society's headquarters, Washington 6, D. C., for price list of maps. For additional information, see "Nepal, the Sequestered Kingdom," in the *National Geographic Magazine* for March, 1935; and "Nepal: A Little Known Kingdom," October, 1920.



MARTIN HURLIMANN

ON THE GHATS OF THE SACRED BAGHMATI RIVER THE BODIES OF PIOUS HINDUS ARE BURNED AND THEIR ASHES STREWN ON THE WATERS—PASHPATI, HOLY CITY NEAR KATMANDU, NEPAL

NATIONAL PARK SERIES: No. 27

Shenandoah, Where a Highway Grazes the Sky

(This is the final article in the National Park Series.)

THE Blue Ridge Mountains of Virginia are the main attraction in Shenandoah National Park—one of the country's most visited scenic playgrounds. Located 75 miles by shortest road west of Washington, D. C., this comparatively new park has lured as many as a million visitors in a single year. Skyline Drive (illustration, page 8) carries motorists to the top of Blue Ridge and along its crest for 96 thrilling miles.

Those acquainted with the rocky spectacle and great elevation of western national parks sometimes scoff at the 3,000-4,000-foot level of Blue Ridge. "These are just hills," they say. Others retort that Blue Ridge has more important qualities than height—rounded, eye-resting contours, vegetation-covered slopes extending to the summit, and the tremulous blue haze which adds beauty and mystery to distant vistas.

Valleys and Mountains Extend to the Vanishing Point

Shenandoah National Park is long and narrow, at places just wide enough to include the crest of the ridge. Again, it takes in the entire slope to the valleys on either side, and many spur ridges.

Overlooks at every vantage point along Skyline Drive provide safe and parklike stopping places for viewing the green and brown patchwork of the valley lands. On clear days the eye carries across the valleys to distant mountain ranges repeating each other to infinity.

East of Blue Ridge lies the Piedmont, not actually a valley, but gently rolling foothills merging into the Atlantic Coastal Plain. West of the north two-thirds of Skyline Drive is Page Valley, the narrow part of Shenandoah Valley between Blue Ridge and Massanutten Mountain. Beyond this razorback ridge extends famed Shenandoah Valley proper.

From the Piedmont and "the Valley," as Virginians simply refer to Shenandoah Valley, came great Americans—Thomas Jefferson, Woodrow Wilson, Cyrus McCormick, Sam Houston, George Rogers Clark, John Marshall, and many others. Before the park was established in 1935, many mountaineer families still lived in the "hollows" high on Blue Ridge.

Appalachian Trail Winds Through Entire Length of Park

At one time the Blue Ridge barrier marked the limit of western expansion. In 1716 the royal governor of Virginia, Alexander Spotswood, rode with his "Knights of the Golden Horseshoe" to the Blue Ridge crest and looked down into the unknown wilderness beyond. He penetrated the ridge at Swift Run Gap, through which U. S. 33 crosses the park today.

Paralleling and sometimes crossing Skyline Drive is the Appalachian Trail. In its 2,000-mile sweep from Maine to Georgia, it traverses the full length of Shenandoah National Park. Many shelters and a few cabins are placed along it. The park has 220 miles of trails.

Short hikes or rides from Skyline Drive reach Marys Rock (3,514), Stony Man (4,010), Hawksbill (4,049), and other individual Blue Ridge peaks. Hawksbill is the highest point in the park, but the most spectacular

government supplied ammunition to shoot the deer and thereby provided residents with a new means of livelihood. Deerskin makes fine leather, and about 60,000 hides are shipped annually to Australia.

New Caledonia is nearly 800 miles east of the nearest point on the Australian coast. It is about as far south of the Equator as Cuba is north. Its climate, unlike that of many tropical islands, is healthful. Temperatures in summer, December to April, average 72 degrees.

In Nouméa live nearly a quarter of the island's 53,000 people. About 28,000 are Melanesian-Polynesian, descendants of the original islanders. The startling redheads among many of the children are not the result of inheritance but of delousing by quicklime, which bleaches.

Nouméa has New Caledonia's only good port facilities. Small towns rim the island and from several of their open roadsteads and docks nickel, chromite, and iron ore are shipped. An automobile road runs along the west side of the island. Three short roads cut from coast to coast across the mountains.

New Caledonia, with its varied terrain, fertile soil, and favorable climate, provides an excellent field and laboratory for the Oceanic Institute's work in various sciences allied to agriculture and peoples.

NOTE: New Caledonia is shown on the Society's map of the Pacific Ocean.

See also, "War Awakened New Caledonia," in the *National Geographic Magazine* for July, 1942; and "Treasure Islands of Australasia," June, 1942*. (*Issues marked by an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.*)

ENOCH PERKINS

IN A NÉHOUÉ MINE, BRIMMED HATS HIGHLIGHT WORKERS' COSTUMES OF DISH-TOWEL TRUNKS

New Caledonia's deep-in-the-earth chromite mines contrast with the island's open-pit nickel diggings. Brimmed hats are common to both. They shield nickel miners from the sun and support miners' lamps. The muscular sledger (center) takes a stance on a crossbeam to reach the receding ceiling.

San Francisco Ponders Fate of Cable Cars

CITY officials, in suggesting the junking of San Francisco's cable cars, have aroused nation-wide interest in the fate of the Golden Gate city's distinctive and historic mode of transportation for hilly streets.

The west-coast metropolis was the birthplace of the cable car. When its cable system was inaugurated in 1873, the new-style vehicles clanked to the top of Nob Hill at the dizzy speed of nine miles an hour—four miles faster than the horse cars they replaced.

Idea Was Copied in Other Cities

The inventor of the cable car was Andrew S. Hallidie, a native of England who came to this country with his father, also an inventor. Cables which the elder Hallidie developed had been used to draw cars in British mines. His son applied them to San Francisco's streetcars and became the father of funicular transportation.

A mechanism was designed by which the underground cable, moving rapidly, could be gripped without jerking the car. The motorman was called the "gripman." The cable moved continuously, powered by electric motors in the car barns. Gripmen varied the speed by gripping the cable tightly or loosely, and stopped the car by disengaging the grip.

Other cities of the United States and Europe copied San Francisco's cable-car system, impressed by its increased speed over horse cars and by its cheaper operation. In many cities cable lines increased the value of real estate in outlying districts by millions of dollars almost overnight. Even cities not especially hilly adopted the cable idea.

Experimental Electric Cars Tried out in Washington

Chicago was one of the heaviest users of cable power. It developed a system of nearly 100 miles that attracted officials from many other cities. The cable system spread to Baltimore, New York, St. Louis, Denver, Kansas City, Cincinnati, Cleveland, and several other cities.

Electric trolleys have gradually superseded cables. Electric power for transportation had been experimented with in a number of cities—Washington, D. C., among them—even before the cable car came into use.

Some of these early electric-car lines were abandoned because of operational difficulties. The unsightliness of overhead trolleys and endless miles of pole-strung electric wires—an early argument against electric streetcars—was overcome in the nation's capital by putting the "overhead" underground just as power for a cable car is underground.

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mountain is Old Rag (3,291), which stands Gibraltarlike east of the main ridge. A six-mile trail leads from Skyland, a resort near Stony Man, through White Oak Canyon to the craggy summit of Old Rag. White Oak River, dropping through its canyon, falls 1,500 feet in two and one-half miles. Two waterfalls and numerous cascades glitter like silver in the cool hemlock-hidden recesses of the canyon.

Leaves and flowers are Shenandoah's crowning glory. Motorists from distant states converge here to see the autumn colors. In spring the big show is blossoms—dogwood, redbud, and many ground flowers. In June the underbrush of the forests becomes alive with mountain laurel.

Cottage or lodge accommodations are scattered along Skyline Drive at six locations—notably at Skyland, Big Meadows, and Dickey Ridge. Big Meadows is a bluegrass "pasture" sprawling over the ridge crest south of Hawksbill, and Dickey Ridge rises near Front Royal, the northern entrance. Campgrounds and picnic areas are provided at several places.

NOTE: Shenandoah is shown on the Society's map of Southeastern United States.

For additional information, see "Potomac, River of Destiny," in the *National Geographic Magazine* for July, 1945*; "Patriotic Pilgrimage to Eastern National Parks," June, 1934; "Virginia—A Commonwealth That Has Come Back," April, 1929.

U. S. DEPARTMENT OF THE INTERIOR

THE SKYLINE DRIVE ONE DAY WILL BE MERELY THE NORTH LAP OF A NEARLY 600-MILE MOUNTAIN-TOP PARKWAY CONNECTING SHENANDOAH AND GREAT SMOKY MOUNTAINS NATIONAL PARKS

Rifle-Toting Kurds Live in Three Countries

THE Kurdish tribes of the Middle East, three of whose leaders have been executed for their rebellion last year against the Iran government, are a fierce, virile race of mountaineers with a long-nurtured passion for freedom.

So independent that established governments usually have been able to exercise only nominal control over them, the Kurds are scattered through the mountain fastnesses and valleys of eastern Turkey, northwestern Iran, and northeastern Iraq. This general region is known as Kurdistan, but it is not a political entity and its geographic boundaries are rather indefinite.

Less Than One-fourth of All Kurds Live in Iran

Mt. Ararat, the 17,000-foot peak in eastern Turkey where tradition says Noah's Ark came to rest, is sometimes considered the northernmost point of Kurdistan. The eastern and western edges are in the neighborhoods, respectively, of Lake Urmia in Iran and Lake Van in Turkey. To the south, the region extends past the Kurdish city of Sulaimaniya (illustration, page 2) in Iraq.

Estimates of the number of Kurds who share this wild and rugged country with Turks, Iranians, and Arabs range up to four and a half million. Of these, fewer than a million live in Iran.

The Kurds, from necessity rather than choice, follow a predominantly nomadic life. Many of them live in tents of black goat hair while they move their flocks of goats and fat-tail sheep from one highland pasturage to another. During the winter, when snow fills the mountain passes, the wandering families settle in partially-underground huts.

Some of the tribesmen dwell more or less permanently in villages built on hillsides near fields of wheat, barley, and rice; and orchards of cherry, peach, and apricot trees. Their one- or two-room houses are made of sun-dried mud brick or occasionally of rough stones set in a mud plaster.

Guerrilla Tactics Used in Tribal Feuds and Against Outside Foes

In appearance the Kurdish men are as forbidding as their reputation. Although they are short in stature, their bodies are powerful. The sharpness of their features is accentuated by bristling mustaches and beards (illustration, page 12). Around their waists, above their baggy Turkish-style trousers and below their loose blouses, they sling a variety of weapons —sometimes a dagger, a pistol, a lance, and a rifle.

Whether engaged in a feud with a neighboring tribe or battling external enemies, the Kurds have been renowned as brave and ruthless fighters, skilled particularly in guerrilla warfare. From their encounters with the Sumerians, Hittites, and Assyrians of pre-Christian days through the Arab, Mongol, and Turkish invasions they gave a good account of themselves. The height of their power was during the Crusades.

In the peace conferences after the First World War the Kurds sought autonomy. Unsuccessful in that quest, the tribes in Turkey rebelled in 1925 but were put down. In Iran the Kurds have made periodic attempts to obtain independence.

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London's last cable car disappeared from Brixton Hill in 1905. But Edinburgh's cable-car system did not give way to electricity until 1919 and cables are still used there on steep grades. Cincinnati's inclined railways lift electric cars up the city's hills.

The funicular railway (below) at Naples would doubtless have been the most famous in the world even if the long-popular *Funiculi-Funicula* had not been composed to celebrate its glories in song.

R. RAFFIUS

VISITORS REACH VESUVIUS BY CABLE CAR

Nearly half a mile long, this funicular railway ascends the ash cone to the crater of the Italian volcano. It is the last lap from Naples. Sightseers leave the city on "circumvesuviana," an electric line that encircles the mountain. At Resina they board a trolley which becomes a cog railway. Then finally they ride this cable line, the inspiration for the song "Funiculi-Funicula."

This cable car has carried thousands of tourists up the slopes of Mt. Vesuvius. It rises one foot in every two feet of rail.

On the near-by Isle of Capri, a funicular railway climbs from the wharf at Marina Grande to the town of Capri, nearly 500 feet above the sea. The Isle of Man also has cable-car service from its wharf. A cable carried tourists up to the Basilique de Sacre-Coeur overlooking Paris from Montmartre. The heights of Hong Kong also are reached by cable car, as are the heights above San Sebastian, on the north coast of Spain.

Buses to Replace Cable Cars

For many years a cable car operated from the river bluff at the brink of Niagara's American Falls to the river bank near the foot of the cataract. This has been replaced by an elevator.

The plan is for San Francisco's cable cars to be replaced by buses. The city's newest cable car is more than 40 years old. Repairs to these old-timers are a problem. There is little profit in making spare parts for a vanishing vehicle. Gripmen are disappearing. Few men wish to learn a trade with so little apparent future. Of a total trackage of 112 miles, only 17 miles are left, and less than seven of these miles of track are city owned.

Despite their clannishness, the Kurds are a most hospitable race. Every aga, or local chief, maintains a guesthouse where he entertains visitors with mutton, rice, sweet tea, and a sour-milk drink called mast. Kurdish women have acquired much more freedom than among other Mohammedan peoples.

General unrest among the Kurds in the past year spread to Iraq. After a revolt against the government of that country, many tribes moved across the border into Iran. These nomads are now being brought under control by Iran's army.

NOTE: The region inhabited by the Kurds may be located on the Society's map of Europe and the Near East.

For additional information, see "Mountain Tribes of Iran and Iraq," in the *National Geographic Magazine* for March, 1946; "Forty Years Among the Arabs," September, 1942; "Old and New in Persia," September, 1939*; and "The Kizilbash Clans of Kurdistan," October, 1928.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, April 8, 1946, "Mountains Frame Salt Lake and Plain in Disputed Azerbaijan."

E. R. LEACH

POLITICAL AND RELIGIOUS LEADERS OF THE ROWANDUZ KURDS HOLD A DINNER CONFERENCE

The chief, or aga (left), rules a tribe in northeast Iraq. The man at the right is a mullah, a village priest who officiates at weddings and deaths. In Moslem fashion, they eat with their fingers.

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